Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1-2. (Canceled)

3. (Previously Presented) An optical positional deviation detecting apparatus for optically detecting a positional deviation in alignment between a first mark and a second mark of a measurement mark configured by forming the second mark on the first mark, comprising:

an irradiation optical system for irradiating the measurement mark with a beam of irradiation;

an image forming optical system for forming an image of the measurement mark by converging reflected beam from the measurement mark;

an imaging device for capturing the image of the measurement mark, which has been formed by said image forming optical system;

an image processing device for measuring the positional deviation in alignment between the first mark and the second mark by processing an image signal obtained by said imaging device;

a field stop provided on said irradiation optical system; and

a field stop position adjustment mechanism for adjusting a position of said field stop, in a plane perpendicular to the optical axis, while maintaining a size of the image field fixed;

wherein said field stop position adjustment mechanism adjusts the field stop position on the basis of an asymmetric focus characteristic of the line and space mark pattern image obtained when forming the image of a line and space mark pattern within an image field area of said imaging device.

4. (Previously Presented) An optical positional deviation detecting apparatus according to claim 3, wherein said field stop position adjustment mechanism adjusts the field stop position so that the asymmetric focus characteristic of the line and space mark pattern image obtained when forming the image of the line and space mark pattern within the image field area of said imaging device, exhibits a characteristic that is symmetric with respect to an axis which passes through the center of the image field and which is perpendicular to a direction in which the positional deviation is detected.

5. (Previously Presented) An optical positional deviation detecting apparatus for optically detecting a positional deviation in alignment between a first mark and a second mark of a measurement mark configured by forming the second mark on the first mark, comprising:

an irradiation optical system for forming an image of the measurement mark with a beam of irradiation;

an image forming optical system for forming an image of the measurement mark by converging reflected beam from the measurement mark;

an imaging device for capturing the image of the measurement mark, which has been formed by said image forming optical system;

an image processing device for measuring the positional deviation in alignment between the first mark and the second mark by processing an image signal obtained by said imaging device;

a field stop provided on said irradiation optical system; and

a field stop position adjustment mechanism for adjusting a position of said field stop, in a plane perpendicular to the optical axis, while maintaining a size of the field stop fixed;

wherein said field stop position adjustment mechanism further comprises an imaging device position adjustment mechanism and adjusts the position of said imaging

device in accordance with the field stop positional adjustment effected by said field stop adjustment mechanism; and

wherein said field stop position adjustment mechanism adjusts the field stop position on the basis of the asymmetric focus characteristic of a line and space mark pattern image obtained when forming the image of a line and space mark image is formed within an image field area of said imaging device.

6. (Previously Presented) An optical positional deviation detecting apparatus according to claim 3, wherein said field stop position is so adjusted that the focus characteristic on a signal intensity difference at a stepped position on both sides of each line mark or each space mark of at least a set of the line marks or space marks which are symmetric with respect to the center of the image field, among the line marks of said line and space mark, has a characteristic which is symmetric with respect to an axis which passes through the center of the image field which is perpendicular to a direction in which the positional deviation is detected.

7. (Previously Presented) An optical positional deviation detecting apparatus according to claim 3, wherein said field stop position adjustment mechanism adjusts said field stop position so that,

at least one set of pattern areas which are symmetric with respect to the center of the image field, is selected;

then a focus characteristic of a value Q represented by the below formula (1) for each pattern area:

$$Q = 1/n \times \Sigma (\Delta I/I) \qquad (1),$$

where n is the number of lines (spaces) in the selected pattern area;

I is the signal intensity at the non-stepped portion of the stepped portion in each line (or space) within the center of said image field and which is perpendicular to a detecting direction of said positional deviation in alignment;

ΔI is a difference of signal intensity at both sides of the stepped portion in each line (or space) within the selected pattern area, is obtained; and then

the focus characteristic curve is symmetric with respect to the axis which passes through the center of said image field.

8. (Previously Presented) An optical positional deviation detecting apparatus for optically detecting a positional deviation in alignment between a first mark and a second mark of a measurement mark configured by forming the second mark on the first mark, comprising:

an irradiation optical system for irradiating the measurement mark with a beam of irradiation;

an image forming optical system for forming an image of the measurement mark by converging reflected beam from the measurement mark;

an imaging device for capturing the image of the measurement mark, which has been formed by said image forming optical system;

an image processing device for measuring the positional deviation in alignment between the first mark and the second mark by processing an image signal obtained by said imaging device;

a field stop provided on said irradiation optical system; and

a field stop position adjustment mechanism for adjusting a position of said field stop, in a plane perpendicular to the optical axis, while maintaining a size of the image field fixed;

wherein said field stop position is so adjusted that at least one set of areas which are symmetric with respect to the center of the image field is selected and an amount of

rotationally asymmetric aberration for every selected area is symmetric, in a predetermined focal area in which a focused area is included, with respect to an axis which passes through the center of said image field and which is perpendicular to a detecting direction of said positional deviation in alignment.

9. (Currently Amended) An optical adjustment method of an optical positional deviation detecting apparatus for optically detecting a positional deviation in alignment between a first mark and a second mark of a measurement mark configured by forming the second mark on the first mark, the method comprising:

providing an irradiation optical system for irradiating the measurement mark with a beam of irradiation;

providing an image forming optical system for forming an image of the measurement mark by converging reflected beam from the measurement mark;

providing an imaging device for capturing the image of the measurement mark, which has been formed by said image forming optical system; and

providing an image field position adjustment mechanism for adjusting, in a plane perpendicular to the optical axis, a position of an image field for capturing the image of the measurement mark by said imaging device with maintaining a size of the image field fixed, comprising:

~~a first adjustment step in which~~ adjusting an aperture stop of said irradiation optical system and the aperture stop of said imaging optical system ~~are so adjusted that~~ so that the focus characteristic has a ~~having the~~ value of Q ~~as defined in claim 7~~ as defined by:

$$Q = 1/n \times \Sigma (\Delta I/I) \qquad (2),$$

where n is the number of lines (spaces) in the selected pattern area;

I is the signal intensity at the non-stepped portion of the pattern or the area therearound;the stepped portion in each line (or space) within the center of said image field

and which is perpendicular to a detecting direction of said positional deviation in alignment; and

ΔI is a difference of signal intensity at both sides of the stepped portion in each line (or space) within the selected pattern area,

Q relates ~~relating~~ to said line and space mark in the entirety thereof at the time when the line and space mark image is formed within the image field of said imaging field, is zero;

adjusting ~~a second adjustment step in which~~ a position of a field stop of the irradiation optical system ~~is adjusted~~ so that the asymmetric focus characteristic of said line and space mark pattern image within the image field area of said imaging device exhibits a characteristic that is symmetric with respect to an axis which passes through the center of the image field and which is perpendicular to a direction in which the positional deviation is detected; and

adjusting a ~~third adjustment step in which the~~ position of said imaging device ~~is adjusted~~ for the adjusted field stop position ~~adjusted in said second step~~.

10. (Currently Amended) An optical adjustment method of an optical positional deviation detecting apparatus for optically detecting a positional deviation in alignment between a first mark and a second mark of a measurement mark configured by forming the second mark on the first mark, the method comprising:

providing an irradiation optical system for irradiating the measurement mark with a beam of irradiation;

providing an image forming optical system for forming an image of the measurement mark by converging reflected beam from the measurement mark;

providing an imaging device for capturing the image of the measurement mark, which has been formed by said image forming optical system; and

providing an image field position adjustment mechanism for adjusting, in a plane perpendicular to the optical axis, a position of an image field for capturing the image of the measurement mark by said imaging device while maintaining a size of the image field fixed, comprising:

~~a first adjustment step in which~~ adjusting the aperture stop of said irradiation optical system, the aperture stop of said imaging optical system and a whole or a part of the lens system of a second objective lens or a first image formation relay lens of said imaging optical system ~~are so adjusted~~ so that the focus characteristic has~~having the~~a value of Q ~~as defined in claim 7~~ being equal to

$$Q = 1/n \times \Sigma (\Delta I/I) \quad (3),$$

where n is the number of lines (spaces) in the selected pattern area;

I is the signal intensity at the non-stepped portion of the pattern or the area therearound;the stepped portion in each line (or space) within the center of said image field and which is perpendicular to a detecting direction of said positional deviation in alignment; and

ΔI is a difference of signal intensity at both sides of the stepped portion in each line (or space) within the selected pattern area,

Q relates~~relating~~ to said line and space mark in the entirety thereof at the time when the line and space mark image is formed within the image field of said imaging field, may be zero;

~~a second adjustment step in which~~ adjusting a position of the field stop of the irradiation optical system ~~is adjusted~~ on the basis of an asymmetric focus characteristic curve of said line and space mark image; and

adjusting ~~a third adjustment step in which~~ the position of said imaging device is adjusted for the adjusted image field position. ~~adjusted in said second step.~~